SOP 3 - Chemical Storage

. At the DB NRRC, the general solvent storage room is located in the CHEMICAL HOLDING ROOM (ROOM 227), this room can also be used to store hazardous waste. This is a climate controlled storage room, which could also be used to store high-grade solvents. Various small-scale chemical storage areas are located in laboratories throughout DB NRRC buildings.

. At ASRU there is no chemical holding room and various small-scale chemical storage areas are located in individual laboratories.

. At SNARC, three outside CHEMCAL STORAGE BUNKERS (CSBs) are to be used for storage of bulk chemicals. The CSB marked "**Flammables**" is designated for the storage of automotive, paint, and bulk flammable chemicals. The CSB marked "**Dangerous**" is designated for storage of restricted-use agricultural chemicals, radioactive Carbon-14 and Hydrogen-3 (tritium) waste prior to removal by a contracted waste management firm, and for Iodine-125 decay-in-storage waste. A separate, locked storage cabinet located within this CSB will be used for all radioactive waste. In the CSB marked "**Corrosives**", the north side of the building is designated for low-flammability organic solvents, chlorinated products, corrosive solids, and housekeeping cleaning chemicals, while the south side of building is designated for corrosives; with acids stored on left side and bases stored on right side. Various small-scale chemical storage areas are located in laboratories throughout SNARC buildings.

. The following are general rules for chemical storage:

0. Segregate incompatible chemicals by location, distance, or protective structure.

1. Horizontal separation is appropriate.

2. Vertical separation is not appropriate. Chemicals on upper shelves can spill onto possibly incompatible chemicals on lower shelves.

3. Store poisons in locked cabinets.

. Consider security and access, space, ventilation, fire protection, and chemical arrangement when establishing chemical storage areas.

. Avoid using the floor for chemical storage.

. Do not store chemicals above eye level.

. Verify that chemical storage areas have adequate ventilation, as well as emergency procedures for dealing with leaks, spills, or fires.

. Do not use stock rooms as preparation rooms.

. Work with a companion in store rooms where:

4. You plan an unusually long stay.

5. The store room is in an area of infrequent traffic.

6. The materials being dispensed are highly hazardous.

7. Safety considerations make you uncomfortable working alone.

B. When working alone in a stock room, it is good practice to leave the door open, to work within view of someone else, or to notify others of the location and planned duration of your work.

. Insure chemical containers are properly labeled:

1. Date of acquisition.

2. Date of opening.

3. Expiration date (if necessary).

4. Contents.

5. Warnings and type and degree of hazard.

. Semi-annually examine stored chemicals. Properly dispose of those that:

6. Have been kept beyond their appropriate shelf life.

7. Have deteriorated.

8. Have questionable, unreadable, or missing labels.

9. Are leaking.

10. Have corroded caps or have lost container integrity.

11. Have other identifiable safety problems.

. The following are additional rules for chemical storage in the SNARC CSBs:

12. CSBs are to be used for storage only of bulk chemicals in sealed containers.

13. Storage or dispensing of small (< 5 gal) quantities of chemicals, except as noted below, are not permitted in the CSBs.

14. Containers of 30-gal or larger outfitted with hand pumps or mechanical dispensers are the only acceptable forms of dispensing within the storage bunkers. All other packages or containers of chemical must be removed from the CSBs before opening or dispensing.

15. Every container of chemical stored in the CSBs must be permanently labeled (see Section L above) and must include identification of the owner. Owner accepts final responsibility for proper dispensing, use, and disposal of any chemicals stored in the CSBs.

16. Labels on items stored in the CSBs must be original manufacturers label or a legible, properly completed chemical label as approved by the Location Chemical Hygiene Office; all labels will be suitably protected against corrosion or decay.

17. Inventory log sheets will be maintained for each CSB.

18. All planned additions or purchases to bulk chemical inventory must be preceded by a good-faith attempt to use existing inventory.

19. All additions to bulk chemical inventory must be approved by the CDSO or a SNARC representative.

20. All additions or removals of chemicals must be dated and signed on the CSB inventory log sheet maintained by the CDSO or a SNARC representative.

21. Inventories will be physically verified and updated **semi-annually** by the CDSO or a SNARC representative with the help of all personnel who have chemicals stored in the CSB. Owner's are responsible for rendering any aid or information deemed necessary in completing the inventory.

22. Chemical inventory older than 5 years must be properly used, donated, or disposed.

23. Waste containers appropriately marked for the type of waste contained will be stationed in each CSB as a final aggregation point for hazardous waste accumulated in individual laboratory Satellite Accumulation Points prior to disposal by a contracted waste management firm.

24. Access to waste disposal containers will be controlled via locked caps; the CDSO or a SNARC representative will maintain keys to caps.

25. All additions of waste must be noted and initialed on an appropriate waste log sheet.

26. Access to the storage cabinet containing radioactive waste will be restricted by the LRPO.